Purchasing World®

MAY 1986

C4670-1A

Systems contracts put control in MRO buying

Buying fasteners—specials here, standards abroad

Auto buyers demand corrosion-fighting steels

Purchasing gains clout in B-school classrooms

Lid to stay on packaging prices

PFW A401 509253C9 3108
COPY ONE/CONGRESSIONAL INF
STATISTICAL REFERENCE IN STA
4520 EAST-WEST HWY STE 8
BETHESDA MD 20814

PurchasingWorld®

Helping you manage the business of buying

May 1986 Vol. 30 No. 5

Special report: MRO buying

51 Systems contracts put control in MRO buying
Here's how systems contracts are taking inventory, paperwork, and cost out of MRO buying and putting reliability and quick response back in at Carborundum Co.

54 Hot competition in MRO cools prices
It's another problem-free year ahead for MRO buyers. Overall prices will hold to about 2-2.5%, but demand should climb 4-5% in total dollar sales.

56

Features

56 Lid to stay on packaging prices
Cut-throat competition plus plenty of capacity will continue to hold prices down in almost all areas of the $70-billion-plus packaging market. Expect only modest increases—about 2.7% overall.

64 Buying fasteners—specials here, standards abroad
The domestic fastener industry—like a lot of American business—is going through a shaking out period with fierce competition at home and from abroad. That spells a very healthy buyers' market—but it could spell problems in the long-run.

70 Automakers demand corrosion fighting steel
Facing the threat posed by plastics and other substitute materials in cars, steelmakers are going out of their way to respond to automaker's demand for a wide choice of better steels.

77 Purchasing gains clout in B-school classrooms
There's big demand by companies for degreed purchasing graduates. Business schools are placing more emphasis on purchasing and materials management course work to meet it. Here's an update of what programs are being offered.

82 Oil cuts to spur GNP, impact prices
Analysts at Wharton Econometrics take a close look at the effect lower oil prices will have on key economic sectors.

96 Enter *PW*'s Crystal Ball contest
Win a new computer and have some fun at the same time by predicting the outcome of 1986 economy.

Cover by Donna D'Amico

96

Departments

4 PW Pointers
6 Editorial
8 PW Predicts
19 Datatrak
38 Law
42 Negotiations
44 Transportation Report
86 Pinkerton on PCs
90 Sample Pak
94 Ad Index
95 Classified

PurchasingWorld (USPS 472 470) is published monthly by International Thomson Business Press, Industrial Publications Group, 6521 Davis Industrial Parkway, Solon, OH 44139. Printed in USA. Subscriptions: Available without charge to qualified purchasing executives in US manufacturing companies. Available to others in the US for $46/year; Canada $56/year. Foreign subscriptions are available for $85 airmail or $60 surface mail. Sole agent for all subscriptions outside the USA and Canada is J.B. Tratsart, Ltd., 154a Greenford Road, Harrow, Middlesex HA 13QT, England. Second class postage paid at Cleveland, OH, and additional mailing offices. Editorial, circulation, and business offices: 6521 Davis Industrial Parkway, Solon, OH 44139.

© Copyright 1986 by Huebner Publications, Inc., subsidiary of International Thomson Business Press—All rights reserved ISSN 0093 1659.

Postmaster: Send address changes to **PurchasingWorld**, 6521 Davis Industrial Parkway, Solon, OH 44139.

PW PREDICTS

Deflating oil tumble hits all sectors of economy

The price news is almost too good to be true. The big drop in crude oil prices has pushed most key inflation yardsticks into the negative column.

Industrial producer prices—the area of most immediate interest to purchasing managers—registered a 2% decline during the first three months of the year. And even with some second quarter leveling off, the first half of the year is likely to be down about a percentage point or two compared to late 1985 levels.

Confirmation of all this comes from buyers responding to the latest NAPM Business Survey report. Specifically, 17% of the respondents report lower prices. More significant, those reporting price declines have equaled or topped those being socked with increases for 16 consecutive months.

Aside from oil and other forms of energy, there's widespread easiness in such basic commodity areas as industrial chemicals, plastic resins, many construction materials, and a fair number of nonferrous metals.

The sharp decline in oil tags, of course, has played a major role in all this commodity weakness. But there are other important downward-tugging pressures:

- **Less-than-expected demand gains:** Real GNP advances so far this year have only been 2-3% at annual rate. That's not much of an improvement over last year's 2.2% increase.
- **Continued import competition:** This is occurring despite a weakening dollar—probably for several reasons. For one, overseas production costs have also dropped because of lower-priced oil. And the U.S. market is so large that it effectively sets the world price for a wide range of goods.

Also, the U.S. dollar has not declined that much against the currencies of many of our trading partners. Nor is it likely to do so. This is particularly true of Canada, our number one trading partner.

- **Continued excess capacity:** The average American facility is currently operating at only 79.4% of its potential—well below the 85% rate commonly accepted as the cut-off point between a buyers' and a sellers' market. Industrial production may advance by only 3-4% in 1986 *vis-a-vis* all of last year.

Looking at the all-inclusive GNP deflator, little more than a 3% increase now seems likely for the year as a whole—about one-half a point under levels predicted just a few months ago.

And the drop in more sensitive industrial producer prices is likely to be even more dramatic—the previously predicted 1-5% increase is now being revised to near-zero.

Similar improvement is also projected for the cost-of-living—with the overall advance here into the 2.5-3% range.

Paper demand

Look for paper demand to continue growing at a respectable clip—with about 2.3% average annual gains likely from now into the mid-1990s.

But advances will be uneven. The best showing will be in uncoated groundwood, coated papers, and uncoated free sheet. But use of packaging and industrial grades may well decline (perhaps as much as 2% a year)—as plastic continues to make inroads in the key bag and sack markets.

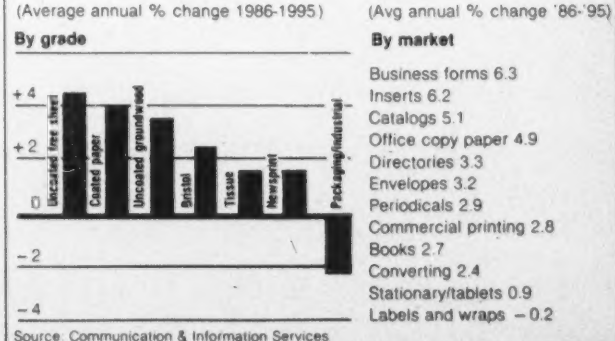
A new study by Communications Information Services, Concord, CA, looked at printing and writing grade demand from an end-market perspective, and found variations—with business forms, inserts, catalogs, and office copy paper expected to lead the pack.

And, paper markets are likely to remain fiercely competitive—as U.S., Canadian, and off-shore producers vie for market share.

Some other specific projections of the report:

- Total U.S. demand for paper grades will reach 54.2 million tons in 1995 (vs. 44.8 million this year).
- Total per capita paper consumption will increase to 76.3 lb (vs. 58 in 1986).
- Imports of printing and writing grades (except newsprint) will comprise 5.9% of total new supply in 1995 (vs. 4.8% in 1986).
- The impressive 4.4% annual rate of increase seen for uncoated groundwood will be sparked by big gains in inserts and forms.
- The expected 4% annual rate of growth for coated paper will be uneven—with biggest gains in coated freesheet and smallest in coated groundwood.

Paper demand: a long look ahead



Source: Communication & Information Services

Building materials

CURRENT SITUATION: The market remains easy because of ample supplies, strong import competition and falling crude oil tags. **Overall price averages are running about 1.5% under year-earlier levels,** despite continued brisk building activity. Fair-sized advances in aggregates and in some ready-mix concrete lines—and even lumber—have been offset by weaknesses—in asphalt (50% of which is oil) and in steel.

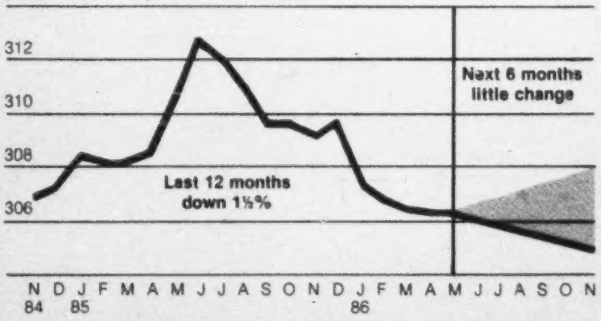
DEMAND: Construction outlook is bullish as mortgage rates drop into the single-digit range. Housing is expected to hit 1.85 million starts, up 7%. **Look for gains in key areas.** Softwood lumber should easily top the 31.7 billion board feet shipped last year. Other anticipated shipment gains—softwood plywood (4%), particleboard (6%), flat glass (3%), cement (3%), brick and structural clay tile (6%), concrete block and brick (6%), ready-mix concrete (7%), gypsum products (5%).

SUPPLY: Capacity is more than adequate in nearly all lines. And importers stand ready to fill in any holes that might turn up. More than 15% of cement consumption is now traceable to imports. And Canadian shipments will continue to be a major factor in the lumber market. Foreign firms have either been purchasing domestic facilities or entering the market with new plants in such areas as cement, floor coverings, and plumbing fixtures.

PRICE OUTLOOK: Small advances are possible as demand improves and the dollar weakens. Dumping charges pending in the steel area could mean as much as a $20/ton increase in some structurals over the next few months. Lumber prices are also more buoyant, though Canadian competition should keep any upward move here to very modest proportions. Also by year-end, averages for flat glass, paint, and insulation materials should be up 3%, 2%, and 1%, respectively.

Construction material prices

(Index: 1967 = 100)



Electronic Components

(%change in $ consumption)

	Semiconductors	Passive Components
1985	−24.0	−6.0
1986	+13.0	+8.5
1987	+24.6	+13.1

Source: Henderson Ventures

Electronic components

The industry appears to be bouncing back from a disastrous 1985, when consumption dropped nearly 25% for semiconductors and more than 5% for passive components. This year, for example, Henderson Ventures, a major market research house, sees semiconductors and passive components up 13% and 8.5%, respectively. And this will seem modest compared to 1987, when advances of nearly 25% and 13% are anticipated. Price averages for semiconductors are also expected to firm—prodded in large part by better demand and the up-to-20% price increases posted by the Japanese.

Steel

The small price hikes in the first quarter have held up for the most part. But additional hikes scheduled for May (ranging from $12-20/ton on hot-rolled, cold-rolled, and coated products) have failed to hold. Meantime, demand isn't all that bad. The first quarter domestic shipments came to nearly 19 million tons—up about one million from a year earlier. But strong imports (24% of the market so far this year) could lead to some eventual weakening, especially if yearly tonnage figures fail to top last year's disappointing 73 million tons.

Personal computers

The price war continues. The latest salvo was fired by IBM which reduced tags on virtually all of its existing computers by as much as 25%—bringing a basic PC to under $2,000. And cuts on other IBM models may not be the last word. The company's existing AT model (at $5,295) will be competing against a new AT version that is one-third faster at the same price. A new IBM laptop which sells for $1,995 could also set off a round of price reductions by competing laptops which have been selling in the $2,500-4,500 range.

Aluminum

Markets remain fairly buoyant, with producer ingot now fetching 66¢/lb (vs. only 55¢/lb at the beginning of the year). Producer billet is also up—close to 74¢/lb. Also on a bullish note: continued declines in Free World primary metal stocks—off over 20% in the past year. Demand gains, however, should be modest, with U.S. domestic deliveries expected to rise only about 1-2%—to 7.75 million tons. Even with labor contracts expiring, no one expects a strike. Hence only limited

Zinc

CURRENT SITUATION: Prices will continue to be on the shaky side—with producer metal being discounted to as low as 30¢/lb. Tags were as high as 47¢/lb last spring—making for a price decline in excess of 30% in just one year. Producers have moved to cut output, but **reductions have generally been small—not nearly enough to redress the supply-demand balance.**

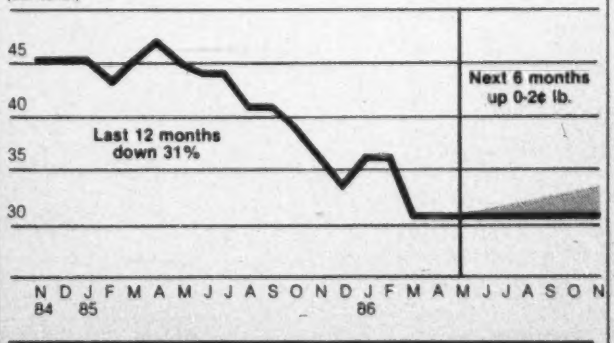
DEMAND: Don't expect much of a pickup this year. Free World consumption may hit 4.7 million metric tons—making for only a 1% overall increase. And the Eastern bloc could cut their imports by 50,000-60,000 tons—thus negating the Free World gain. **The U.S. outlook isn't that bullish either.** Tonnage consumed in galvanized steel will rise, but zinc die casting alloy use could drop. **Look for only a 3% overall domestic rise this year.** Government estimates see only 2% annual gains through 1990.

SUPPLY: The global glut is likely to persist because recent cutbacks may not last. Producers find that it's much more efficient to run at full production. And the industry lacks mine-smelter integration—with custom smelters (who make their money on treatment charges, not on the price of the metal) controlling a large part of the market. Several major firms are expected to boost concentrate output this year. **Upshot: Mine production could rise by five million metric tons this year.**

PRICE OUTLOOK: It's hard to see any near-term advance. Given demand and supply problems, the metal will be lucky to maintain its current "low 30s" profile through summer and into early fall. Beyond that, a modest uptrend is possible, assuming that the U.S. and other Free World economies continue to advance. Even so, **tags will still be far under the highs of a few years back.**

Producer zinc prices

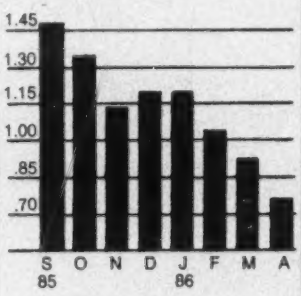
(cents/lb.)



forward buying and relatively modest price gains are expected in the months ahead.

Benzene prices

($ lb. spot, Houston)



Chemical feedstocks

Benzene is weakening. Best bet: second quarter spot prices averaging out near 75¢/gallon—a far cry from the $1.30/gallon quote of early January—with contract prices put at 80¢/gallon. Lower oil tags are also pressing ethylene. Some producers are asking only 15.5¢/lb for their second quarter production—off some 3.5¢/lb from the average report in the first quarter.

ABS plastics

A weakening market and imports have pushed transaction prices for key pipe grade down 1¢/lb into the 60-67¢/lb range—with some isolated quotes as low as 58¢/lb. And resins to the automotive and refrigeration markets have dropped some 3¢/lb. Here, heavy import competition is a factor, with added impetus coming from both substitution of polystyrene and lower feedstock costs (stemming from the recent decline in crude oil prices). Styrene acrylonitrile (SAN) resins are down as much as 10¢/lb.

Machine tools

Japanese producers are said to be dumping equipment at substantial discounts. Reason: They fear the imposition of quotas and are attempting to build up as big a sales base as possible. Nipponese producers are said to be particularly aggressive in products such as computer-controlled lathes where they are fighting each other more than they are U.S. firms. Further adding to the Japanese pressure on U.S. markets is the fact that these overseas sellers have a lot of excess capacity.

Lead

Markets remain depressed, with the metal remaining in the low 18¢/lb range and spent batteries going for as low as 1.5-1.75¢/lb. New consumption forecasts add to the bearishness—with 1986 U.S. chew-up expected to remain unchanged at 1.1 million tonnes. Other bearish factors: 1) continued ready-availability of secondary lead, 2) the massive supply of scrap building up around the world, and 3) the fact that two-thirds of the primary supply is mined as a by-product or co-product of other metals. Continued development of longer-

Printer prices

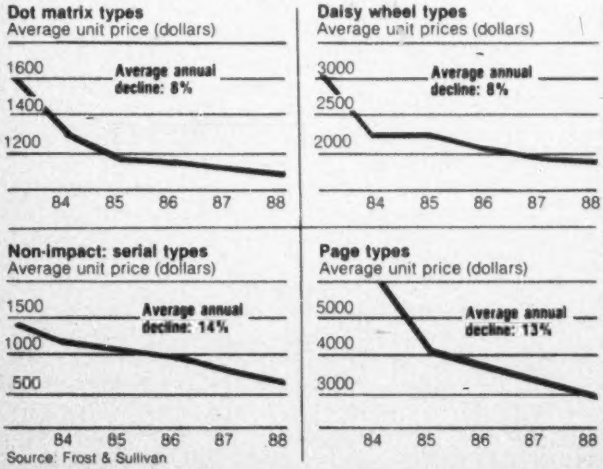
Budget for substantial cost declines in letter quality and near letter quality (NLQ) printers over the next few years. Best bet: Average unit price declines should range from 8 to 14% annually.

These new estimates are part of a Frost & Sullivan evaluation of the entire printer market. Behind the anticipated declines are 1) economies of scale, as sales rise close to 50% a year, and 2) improving technology. Here's a more detailed rundown by type of printer:

- **Dot matrix models:** year-to-year unit price changes will be a function of both price decreases and changing product mix. True, the more expensive (over 250 cps) segment will be capturing an increasing share of the market. But more than offsetting this will be continuing price decreases.
- **Daisy wheel models:** Product mix is moving in the opposite direction, with cheaper, slow-speed under 35 cps types growing fastest. This adds to the effect of continuing price decreases. In any event, unit tags for the under 35 cps group will fall 15% a year through 1986.
- **Serial non-impact printers:** Direct thermal models have been holding the majority of the market here—but generally have been low-price, draft-only models attached to portables or home computers. Hereafter, ink-jet machines, quality direct thermal, and thermal transfer models will capture an increasing share.
- **Page non-impact printers:** The market virtually began in 1984 with the introduction of the Canon laser printer engine. Last year's large price drop was caused by the increase in the number of low-priced, limited-function models. But from now on, price decreases will moderate.

Office printer price trends

(The outlook for letter-quality and near-letter quality types into 1988)

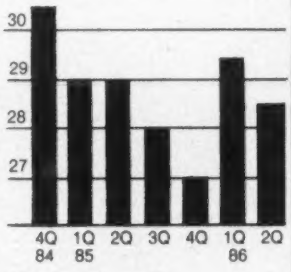


Source: Frost & Sullivan

lasting and reduced-lead-content batteries isn't helping.

High density polyethylene

(¢/lb., injection molding grade)



High-density polyethylene

A second 1986 attempt to boost prices 3-4¢/lb has apparently failed to hold. Expect to continue paying 27-30¢/lb and 30-33¢/lb for the injection molding and blow molding grades, respectively. Weakness indicates that supply is nowhere near as tight as official 90%+ nameplate operating rates would seem to suggest. Reason: a good deal of swing capacity is being shifted away from linear low-density polyethylene—enough to offset what now looks to be about a 5% increase in overall 1986 high-density demand.

Paper

About $20 of a recent $30/ton boost in linerboard has held up. And producers are aiming still higher—with at least one major mill announcing a new list increase to $320/ton. Also, some price boosts have been posted in uncoated free sheet (at the low end of the line in roll offset paper and registered bond)—with average quotes in these areas said to be up by about $30/ton. Market pulp is also firming—aided by recent weaknesses in the dollar.

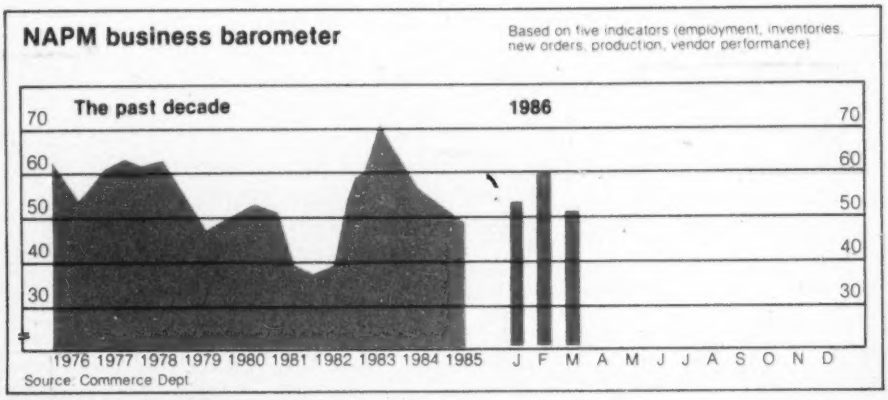
Copper

The red metal continues to bump along at near 70¢/lb, despite the possibility of a summer work stoppage. Two reasons: relatively flat consumption and ample supplies. On the latter score, it would take at least a month-long strike to have any major impact. It is difficult to see tags rising much above 75¢/lb even if there are some labor problems. Best bet for 1986 as a whole (assuming no strike): a 70¢/lb average—just 3¢/lb above last year's low—hardly reassuring for an industry where the break-even point is also estimated to be around 70¢/lb.

Computer software

Competition from mail order outlets is resulting in steep discounting. Lotus 1-2-3 is available for as much as one-third off its official $495 list. And Ashton-Tate's dBaseIII is going for 40% or so under its official price of $695. Other signs of easiness: 1) growing pressure for volume discounts on the part of large corporate customers and 2) increasing availability of cheap clones—some versions of Lotus 1-2-3 are selling for as low as $100.

BUSINESS DATATRAK


NAPM business barometer
Based on five indicators (employment, inventories, new orders, production, vendor performance)
The past decade
1986
70
60
50
40
30
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985
J F M A M J J A S O N D
Source: Commerce Dept

KEY ECONOMIC TRENDS

Call it a mini-mini boom

Business gains have been relatively modest over the past month or two. While the trend is still up—and likely to stay up—increases have not been nearly as robust as expected.

Why, then, is growth more restrained? Several factors are in play here: 1) the normal lag before lower inflation, 2) the respite in car buying following last Fall's big buying binge, and 3) relatively high (7%) unemployment rates.

But these should be regarded as short-term phenomena. There is little on the horizon to suggest anything but further gains—albeit moderate ones—in orders, in production, and ultimately in final sales.

For one, key barometers of activity a few months down the pike are still positive. That's certainly true of Uncle Sam's index of leading indicators which has been rising at a rate of 0.5% a month since last Fall. And the same pattern is evident in the N.A.P.M. Business Barometer (see accompanying chart).

Manufacturing inventories also point to better days ahead. The stock-sales ratio here has fallen to what most economists feel is now a rock-bottom level—suggesting that further increases in final demand will have to be met by new production.

Equally assuring is the optimism of the nation's corporate leaders. Dun & Bradstreet's Sales Optimism Index has bounced back to early 1985 high levels.

As Joseph Duncan, D&B's corporate economist says, "Survey results reflect the fact that the economy is strengthening after a lull in 1985—with strong consumer demand and reduced competition from imports fueling the brighter outlook."

In any case, 73% of durable goods manufacturers responding to the D&B survey expect second quarter 1986 orders to top year-ago results—a modest gain over the 70% reading of three months ago.

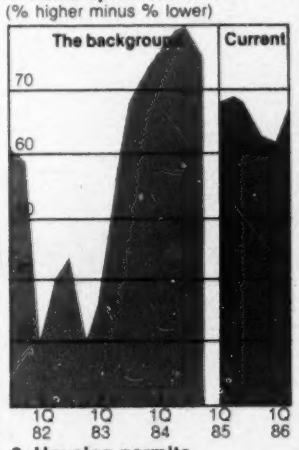
Construction, too, has been looking up in recent months thanks to lower mortgage rates which, at last report, were dropping back to the single digit range for the first time in years.

Housing permits (a leading indicator of housing starts) are now running near 1.9 million annually—about 200,000 above year-earlier levels. Starts for the year could be almost as high, and certainly will be above last year's 1.74 million level.

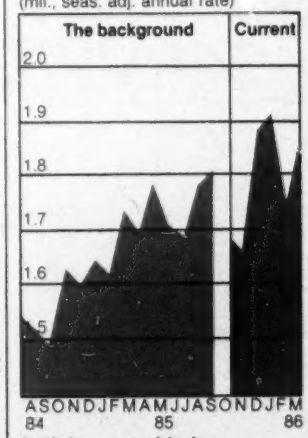
Help-wanted advertising also adds to the optimism. While totals have plateaued out in recent months (and that's why umemployment rates have failed to drop down into the 6% range), ads are still significantly above the

Leading indicators

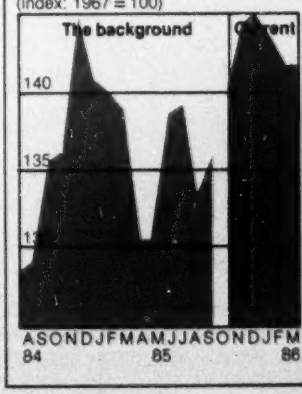
1. Sales optimism index
(% higher minus % lower)



2. Housing permits
(mil., seas. adj. annual rate)



3. Help wanted index
(index: 1967 = 100)



levels of late last year.

Even the trade deficit is showing signs of improvement. Imports in one recent month, for example, fell by nearly 10%. And while one month doesn't make a trend, two signs point to better days ahead: 1) manufacturing imports are at their lowest level in four months, and 2) manufacturing exports are at their highest level in six months.

Much of this trade improvement can be traced to the 30% drop in the dollar since early last year. But an added assist comes from lower-priced oil imports. The point to keep in mind: Last year petroleum accounted for 30% of our overall trade deficit—so lower oil prices here can make a big dent in our negative balance.

Driving costs

A caveat for fleet car managers: Don't base cost estimates on national averages.

Reason: Outlays can vary significantly, depending on where your plant or office is located. A new 20-city study by Hertz finds that costs for a new medium-sized or compact car (driven 10,000 miles per year and held for five years) can range from a low of 46¢/mile in some Midwestern cities to more than 60¢/mile in such metropolitan areas as Los Angeles, San Francisco, and New York. (See chart)

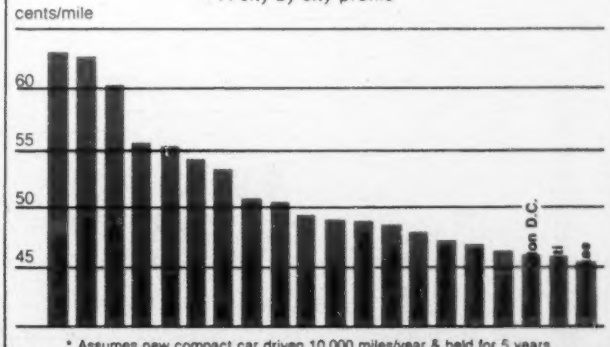
These latter three cities, incidentally, have ranked 1-2-3 for six straight years now. More important, their costs remain far above the 51.6¢/mile 20-city average and even further above the 47.6¢/mile national average which includes low-cost suburban and rural areas.

One key factor behind these city variations: The big differences in outlays for insurance licensing and fees—with costs per mile in this category running from a low of 10.4¢/mile in Cincinnati to 24.8¢/mile in Los Angeles. Significant differentials are also noted in maintenance and repair costs. San Francisco's peak 6.9¢/mile is nearly double Cleveland's 3.8¢/mile cost.

The new study also compares cost changes from year to year. The key finding here: Increases over the last year average out at nearly 4%, or 2¢/mile. But with gasoline (which accounts for more than 15% of total per-mile outlays) way down, a change is likely when the final 1986 tally is in—with the possibility of a fractional decline in overall costs.

Car driving costs*

A city-by-city profile



* Assumes new compact car driven 10,000 miles/year & held for 5 years.

Source: Hertz

Fringe benefits: Still a big bite

By industry

Industry	% of payroll
Food and beverage	41.0
Textile and apparel	30.9
Paper, lumber, furniture	37.0
Printing and publishing	36.5
Chemicals	39.3
Petroleum	43.8
Rubber, leather, plastic	38.3
Stone, clay, glass	40.6
Primary metals	45.4
Fabricated metals	40.8
Nonelectric machinery	37.8
Electric machinery	37.6
Transportation equipment	39.3
Instruments	36.0
Non-manufacturing	34.8

Source: U.S. Chamber of Commerce

By type of payment

Fringes still a big chunk

Fringe benefits are still taking a big bite out of the average payroll dollar.

Though efforts to contain these outlays are intensifying, the overall impact has been negligible. According to a new survey by the U.S. Chamber of Commerce, some 36.6% of the typical payroll dollar (or $7,842 per year per employee) is still earmarked for these "extras." That's only a fractional decrease from the 37.3% peak back in 1981.

Moreover, in many industries the bite remains far in excess of 40%—with the biggest drains noted in primary metals (45.4%) and petroleum (43.8%). At the other end of the benefit spectrum are the service industries where only about 30% share of payroll is noted in the wholesale, retail, trade, banking, and hospital segments.

Other key findings of the study:

- Large firms generally pay higher benefits than smaller ones—with the 38.6% average for outfits with over 5,000 employees comparing to only a 33.9% figure for those with less than 100 on the payroll.
- Payments for non-government pensions are reported by 83% of the companies, with pension payments for these firms averaging 5.9% of payroll.
- Virtually all firms report payments for employee insurance programs—averaging 7.4% of payroll.

The study also provides some numbers on worker contributions: employee payroll deductions include 6.3% for social security, 0.1% for railroad retirement and state sickness benefits insurance taxes, 0.5% for pensions, and 1.5% for life, hospitalization, surgical and other insurance.

CURRENT PRICES

Prices do a balancing act

Credit the continuing energy price decline for another sharp drop in the overall industrial price index.

Last month, for example, this bellwether yardstick of buyer procurement costs dropped 1.4%—a virtual repeat of the decline of the previous 30-day period. Price averages are now close to 3% under year-earlier levels.

Energy's key role in all of this can best be appreciated by looking at the energy and fuel subgroup. Prices here dropped by a big 10% last month.

The biggest individual energy drop occurred in gasoline—a 20% drop in just 30 days. But almost as big a plunge was reported in residual fuel oil (off 12%). Other decreases were noted in home heating oil, natural gas, diesel fuel oil, liquid petroleum gas, and electric power.

If you remove the energy effect, the picture is somewhat different. Nonenergy prices actually rose a modest 0.1%. This nonenergy uptrend is most clearly evident in capital equipment where prices advanced by an average of 0.3%. Light motor trucks and printing trade machinery sparked the boost. This more than offset continued easiness in office and store machines which fell by almost 1%.

Some component part items have also edged up over recent days—notably motor vehicle parts, hardware, and plastic parts and components. But again, there were offsetting declines—particularly in fasteners which fell by almost 1%.

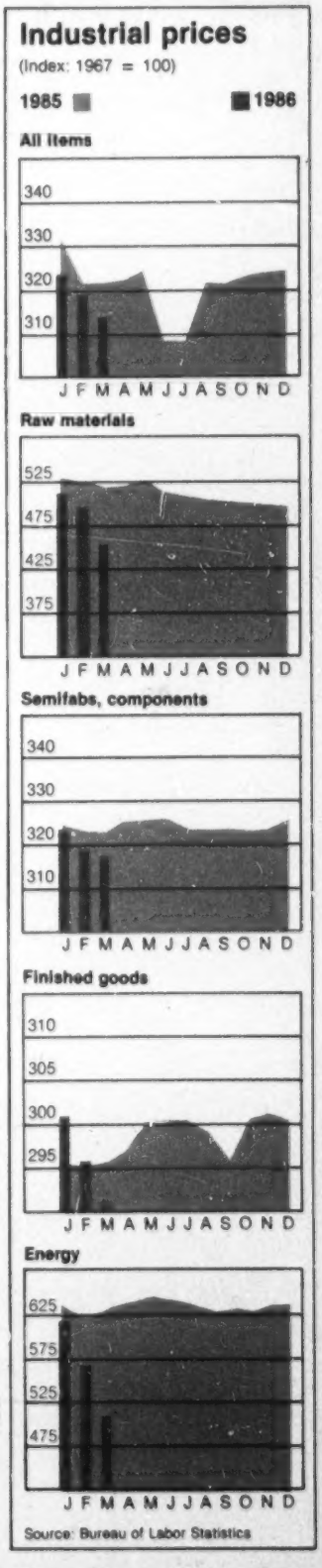
Construction materials were mixed. Lumber, plywood, plumbing fixtures and brass fittings all rose. On the other hand, declines were noted in both gypsum and plastic plumbing products.

A similar indecisive pattern was noted in metals. Gold, platinum, aluminum, nickel, antimony, cadmium, and vanadium all advanced. Weakness appeared in molybdenum, tungsten, cobalt, tin, chromium, and selenium.

The chemical picture also suggests continued easiness. Specifically, reduced petrochemical feedstock costs caused a sharp 2.2% decline in organic chemicals—more than offsetting fractional

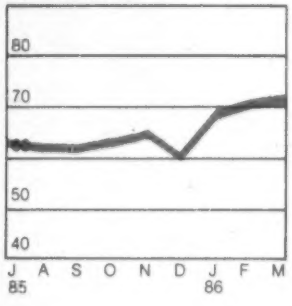
This month's breakdown

	Latest level (Mar.)	% change from: Month ago	Year ago
Bearings	354.2	0.2	2.0
Bolts, nuts, etc	275.4	−0.9	−0.9
Chemicals, inorganic	295.7	0.2	−1.6
Chemicals, organic	353.0	−2.2	0.1
Concrete products	325.4	−0.1	3.0
Corrugated cartons	263.8	−0.1	−8.0
Cutting tools, small	289.6	0.1	1.6
Electric lamps (bulbs)	351.5	0.6	3.2
Electronic components	200.1	0.4	0.7
Fans and blowers	363.0	0.2	1.5
Foundry and forge products	364.8	−0.1	0.6
Fuel oil (residual)	665.5	−12.0	−40.2
Furniture, commercial	315.4	−0.2	3.6
Gasoline	371.3	−21.5	−28.1
Glass, flat	229.5	−0.1	3.9
Glass containers	388.5	0.3	3.9
Gypsum products	351.1	−3.1	4.4
Hand tools	382.2	0.4	3.0
Hand tools, power driven	235.9	0.6	2.0
Industrial furnaces	394.9	−0.2	2.9
Integrating and measuring instruments	234.8	−0.4	1.2
Internal combustion engines	349.6	0.2	2.9
Lubricating oil	381.4	0.2	3.0
Lumber millwork	313.7	0.6	1.1
Material handling equipment	295.3	0.0	0.4
Metal containers	361.2	0.0	0.9
Metal mill shapes (nonferrous)	307.0	0.1	−1.3
Metal tanks	304.9	−0.3	−0.4
Motors and generators	349.3	−0.1	−0.1
Motor trucks	307.3	0.4	4.2
Office and store equipment	153.9	−0.8	0.3
Paperboard	266.1	1.3	−6.9
Paper boxes and shipping containers	265.7	−0.2	−4.1
Paper office supplies	236.9	−0.1	−1.5
Paint	280.0	0.4	1.8
Plastic resins	300.8	−0.1	−1.8
Precision measuring tools	268.3	1.1	2.6
Pumps and compressors	357.9	0.2	0.5
Refractories	373.2	0.1	1.7
Rubber belts and belting	337.5	−0.6	−4.5
Scales and balances	231.6	0.4	0.7
Steel products	345.4	0.1	−5.1
Switchgear	283.6	0.4	0.7
Textiles, synthetic fibers	151.5	0.7	−3.2
Textiles, gray fabrics	151.0	−0.3	−0.7
Tires and tubes	236.5	−0.3	−1.0
Transformers and power regulators	234.4	0.1	−0.2
Welding equipment	299.2	0.1	2.2
Wire and cable	206.5	0.0	1.8

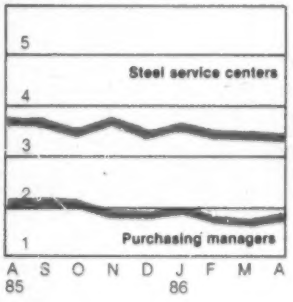


Steel

Operating rates

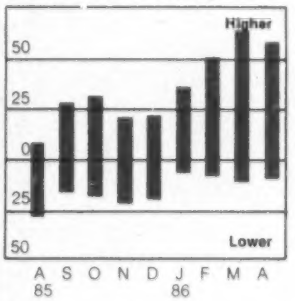


Inventories
(Months supply on hand)

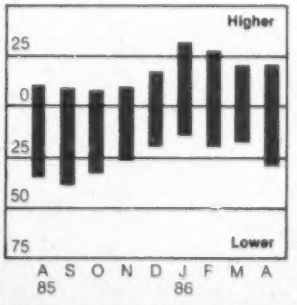


Demand
(Percent of respondents)

Service centers incoming orders



Steel buyer purchase



Import prices
(Compared to domestic)

Steel buyers

ABOVE 12%
SAME 20%
SLIGHTLY BELOW 65%
SUBSTANTIALLY BELOW 3%

Service centers (carbon)

ABOVE 3%
SAME 77%
SLIGHTLY BELOW 57%
0-20% BELOW 3%
OVER 20% BELOW 0%

Source: Steel Service Center Institute, NAPM Steel Buyers Committee

gains in the organic sector. Plastic prices have also begun to weaken a bit.

BLS officials, commenting on the latest price roundup, say that decreases in overall quotes should begin to bottom out this month. But they add that there is still no discernible sign of a major uptrend. As such they predict that averages will still be 1-2% under year-ago levels by the end of the second quarter.

STEEL SCENE

Hikes holding

A slight upward drift in steel prices in likely to continue—at least for another few months. So say distributors responding to the latest Steel Service Center Institute (SSCI) survey. 88% say they will be paying more for steel in six months than they are now.

But the increases are only expected to be in the tolerable 2-5% range. And there's evidence to support these projections. For one, new hikes have been posted on sheet products—the second such advance this year.

Similarly, a second round of increases may soon be shaping up in wire rod where an April $10-20 /ton increase seems to be holding. Reason for the bullishness here: Rising order books have stretched leadtimes out to July.

Just how much will overall steel prices rise? It's hard to say because many buyers have long-term contracts that lock up prices through 1986. But right now, the concensus among experts is that mills will probably increase their 1986 realizations by about 5%—a very modest amount considering the price declines of the past few years.

Further evidence of an uptrend in prices comes from latest reports on import prices. With the dollar weakening, fewer service centers are reporting bargains. Only 60% of distributors responding to the SSCI survey now report lower overseas prices in carbon steel *vis a vis* comparable domestic metal. At the beginning of the year the figure was 87%.

Purchasing managers answering the latest N.A.P.M. Steel Buyer Survey tell much the same story. Some 68% of respondents now report lower foreign prices—considerably under the 80% reading at the end of last year.

It is not all that hard to explain this trend. With currencies (like the Japanese yen) as high as they are compared to the U.S. dollar, some overseas mills have suddenly been transformed into relatively high-cost producers.

Nevertheless, the volume of imports is expected to remain high—partly because many of our overseas suppliers are in countries where domestic currencies have not appreciated relative to the dollar.

Hedging is also to blame for high imports. If a new labor pact isn't signed soon, many buyers may be forced to commit for additional foreign metal.

Incidentally, some additional U.S. ordering may be taking place for the same reason—this is probably why demand has been holding up so well at a time when several major steel consuming industries have been taking a breather.

This hedge factor shows up in the findings that buyer inventories have edged up over the past month. But it is doubtful whether hedging will play a major role in the months ahead. More buyers now expect declines than expect increases in steel receipts over the next few months.

Steel service centers still see order increases, but there is a note of caution from Andrew Sharkey, SSCI president. "Capital goods, energy, and nonresidential construction remain soft—as evidenced by the flat shipping levels in structurals, plates, bars, and tubing," he warns.

Also indicative of distributor caution is the fact that many feel inventory levels are still too high. Indeed, the 29% who feel

stocks are too high relative to current shipments far outweigh the 5% who feel that inventories are too low.

This caution on inventories is also becoming more apparent in the steel buying sector. Despite the fact that PMs have been adding to stocks, they eventually plan to reverse the trend. The evidence here is quite clear—36% of respondents note that inventories are too high relative to demand. And this number is even more dramatic when compared to the zero percentage who feel that stocks are too low.

PROCUREMENT STATUS

Few players in the waiting game

Some very moderate increases in leadtimes may be in the offing for a few product lines.

This is certainly true for some electronic component areas such as CMOS logic and MOS memory devices. And some steel and component part items are taking a bit longer to reach buyer production docks.

Not surprisingly, *PW*'s exclusive leadtime index again registered a 51—slightly above the neutral 50 level. This suggests that stretchouts are now somewhat in excess of shrinkages.

N.A.P.M.'s speed-of-delivery survey results tell much the same story. Specifically, the number of respondents reporting slower deliveries rose to 7% last month—far outweighing the miniscule 1% who noted acceleration. This is the first time in about a year and a half that the number reporting slowdowns dominated.

But it should be noted that the gap between faster and slower is still quite small. More important—there is still plenty of excess capacity around in semiconductors. Expected demand gains this year will recoup only about half last year's decline—a performance hardly calculated to press this industry.

What is true for semiconductors is probably also true in most other sectors. The typical American factory is still producing at only about 80% of capacity—far under the 85% + rate that traditionally has caused bottlenecks.

Why the modest leadtime stretchout? One PM explains that "Suppliers have been reluctant to staff up to meet increased demand. But from here on in I think you'll see a change—and very little further deterioration in delivery performance."

Current inventory policies also seem to confirm the fact that very few buyers are worried. Stock paring continues despite demand gains. The latest N.A.P.M. survey results find parers outnumbering accumulators by nearly a 2:1 margin.

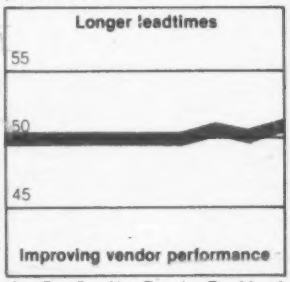
Other significant developments: 1) Only 12% of the respondents are committing 90 days or more in advance for their purchased materials—the lowest such figure in years, and 2) only one item (titanium dioxide) appears on the N.A.P.M. short supply list.

In short, all the signs indicate another problem-free year for industrial buyers—despite the fact that the economy is now well into its fourth straight year of recovery.

Monthly procurement status report

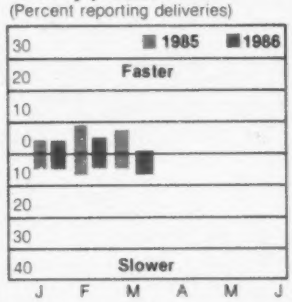
Leadtime index

A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance.



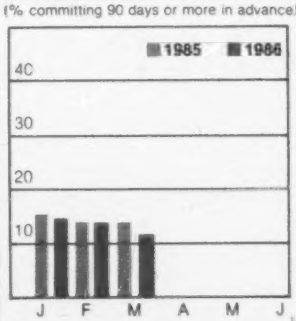
Delivery performance

(Percent reporting deliveries)



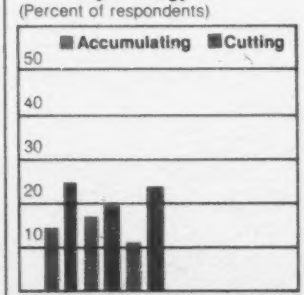
Forward commitments

(% committing 90 days or more in advance)



Inventory strategy

(Percent of respondents)



Source: NAPM

Leadtimes and availability

Chicago: Leads have dropped for electrical items, pipe valves, fittings, and mill supplies (waits are about 1-3 weeks). MOS semiconductors and ICs are also in (to 16-22 weeks). Cold rolled sheet holds (7-8 weeks), as do aluminum (12 weeks) and copper sheet (2-6).

Cleveland: Metals are easily available—alloying types are being shipped on demand. No problems for lumber either (1-3). Corrugated, folding boxes, polyethylene, and PVC all have 2-3 week leads. No problems with plastic packaging material or multiwall papers (4-5 weeks).

Los Angeles: A few double-digit weekly waits persist—in linear ICs (30), galvanized steel (12-14), stainless coil (12-14), and custom storage tanks. Elsewhere, relative ease is suggested by these short leads: Brass castings (4-6), aluminum tubing (6-8), standard fasteners (4), and lube oils (2).

Houston: Another month of basically unchanged leads. Examples: high pressure heat exchangers (4-8 mo.), motor control centers and

BUSINESS DATATRAK

power transformers (3-7 mo.), centrifugal compressors (10-12 mo.), pumps (4-7 mo.), corrugated (2 weeks), and component parts (1-8 weeks).

Philadelphia: A few MRO items are in—cutting tools and lubes (to 4-6 weeks), xerographic paper (stock to 4), special grinding wheels (12), special polishing wheels (14). Steel is holding steady, as are std. drills (2-4) std. taps (3-4), std. grinding wheels (4-6), and standard polishing wheels (2-4).

Pittsburgh: Packaging leads are holding at 4-6 weeks for bags, 3-4 weeks for corrugated and folding boxes, and 4-5 for wirebound boxes. No problems with drums (all at 1 week), lumber (3-4), and steel strapping (2-3). Also readily available: plastic resins (5-6) and paints (4-5).

Leadtimes (in weeks)

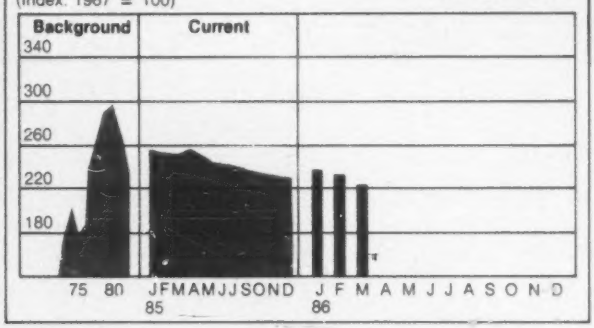
	Now	Month ago	Six months ago
STEEL			
Sheet (Phil)	4	4	4
C-R Sheet (Chgo)	7½	7½	6½
Plate (Phil)	3½	3½	3½
Plate (Chgo)	2½	2½	2½
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	5½	5½	5½
H-R Bars (Chgo)	4	4	3
Cold-Drawn Bars (Phil)	5½	5½	5½
Galvanized (LA)	13	13	13
Galvanized (Chgo)	6	6	8
Structurals (Chgo)	4½	4½	4½
Structurals (Hous)	17	17	17
Tubing (Phil)	5½	5½	5½
Grey Iron Castings (LA)	9	9	9
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	6	6	6
Pipe, Carbon (Hous)	13	13	13
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	13	13	13
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	7	7	7
ICs (Linear) (Phil)	11	11	11
Motors (Phil)	10	10	10
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	9	9	10
Relays (Chgo)	15	15	15
Resistors (Chgo)	9	9	9
Resistors, Wirebound (Phil)	5	5	5
Transformers (Chgo)	10	10	10
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	1½	1½	1½
Plywood (Chgo)	1½	1½	1½
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	2	2	2
Softwood (Phil)	⅛	⅛	⅛
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	½
Naptnalene (Chgo)	2	2	2
Paint (LA)	4	4	1½
Paint, Coil Coating (Pgh)	4	4	4
Paint, Maint. (Clev)	2	2	1½
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Clev)	2½	2½	3½
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	2	2	3
PVC Resin (Pgh)	6	6	6
Titanium Dioxide (LA)	1	1	1
PACKAGING			
Bags, Kraft (Pgh)	5	5	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	6	6
Cartons, Corrugated (Clev)	2½	2½	2½
Cartons, Corrugated (Hous)	2	2	2
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	3½	3½
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3
Shrink Film (Chgo)	6	6	6
Shrink Film (Clev)	1	1	1
Drums, Fiber (Pgh)	1	1	1
Drums, Steel, Std. (Pgh)	1	1	1
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	4½
Strapping (Clev)	1	1	1
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	1	1	1
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NON-FERROUS			
Aluminum Coil (Chgo)	13	13	11
Aluminum Plate (Chgo)	12	12	10
Aluminum Sheet (LA)	4½	4½	4½
Aluminum Sheet (Chgo)	12	12	9
Brass Castings (LA)	5	5	5
Brass Rods (Chgo)	6½	6½	7½
Brass Sheet (Chgo)	4	4	5
Brass Tube (Chgo)	7	7	10
Copper Fittings (LA)	3½	3½	3½
Copper Mill Prod. (Pgh)	6	6	6
Copper Tube (LA)	7	7	7
Copper Tube (Phil)	5½	5½	4½
Lead (Pgh)	2	2	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	2	2	1
Wire, Specialty (LA)	5	5	5
Zinc (Pgh)	2	2	2
MISCELLANEOUS			
Bearings, Domestic (Phil)	2	2	2
Bearings, Foreign (Phil)	12	12	12
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	48	48	48
Compressors, Reciproc. (Hous)	39	39	39
Fasteners (Chgo)	1½	1½	1½
Fasteners (LA)	5	5	5
Fasteners, Std. (Phil)	1½	1½	2
Heat Exchangers, Carbon-alloy Steel (Hous)	21	21	21
Heat Exchangers, Hi-pressure (Hous)	26	26	33
Insulation Mat'l. (LA)	7	7	7
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	1½	1½	2½
Pumps (Hous)	24	24	24
Pumps (LA)	11	11	11
Rubber, Synthetic (LA)	2	2	2
Rubber Hose (LA)	4	4	4
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	17	17	17
Welding Supplies (Hous)	15	15	15

BUSINESS DATATRAK

Raw material price barometer

(Index: 1967 = 100)

Latest month	222.6
Month before	233.3
Year ago	252.4



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt	23.90	23.90	25.10
Steel, bars, dlvd. Phila., cwt., merchant quality	23.95	23.95	23.95
Steel, bars, Pitts., cwt.	23.95	23.95	23.95
Steel, bars, C.R., Pitts., cwt	31.00	31.00	29.25
Steel, plates, Pitts., cwt.	18.25	18.25	23.25
Steel, plates, H.R., Pitts., cwt.	18.25	18.25	23.25
Steel, sheets, C.R., Detroit, cwt.	25.15	25.15	27.10
Steel, strip, C.R., Chi., cwt.	36.18	36.18	35.30
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	.613	.590	.518
Antimony, in alloy, lb.	1.35	1.32	1.36
Beryllium-copper, cost ingot, lb.	5.35	5.35	5.35
Brass, red, 85%, [sheet], lb.	1.32	1.32	1.32
Brass, yellow, [sheet], lb.	1.27	1.27	1.27
Cadmium, ton lots, lb.	1.15	0.90	0.95
Copper, electrolytic, wire bars, refd., lb.	.68	68	69
Copper sheet, over 24 in., lb.	1.41	1.41	1.41
Lead, common, N.Y., lb.	.190	.180	.200
Magnesium, pig ingot, [99.8%], lb.	1.53	1.53	1.48
Mercury, 20 fl. lots, N.Y., fl.	265.00	240.00	300.00
Molybdenum, oxide, dealer, lb.	2.65	2.75	4.23
Nickel, cathode, dealer, lb.	1.86	1.90	2.36
Platinum, dealer, oz.	402.00	403.00	260.00
Silver, N.Y., oz.	5.17	5.56	6.74
Tin, Straights, N.Y., lb.	2.70	4.55	5.27
Zinc, Prime West, East St. Louis, lb.	.33	.34	.47
Zinc, die casting alloy, No. 3, lb.	.415	.415	.535
PAPER			
Uncoated book #3 offset, ton	850.00	850.00	850.00
Watermarked bond, ton	985.00	985.00	985.00
Gummed sealing tape, carton	16.40	16.35	16.25
Shipping sacks, ton	390.00	390.00	440.00
Solid bleached paperboard, ton	550.00	550.00	550.00
Kraft linerboard, 42 lb., unbleached, ton	290.00	290.00	320.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	.228	.222	.361
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.045	1.045	1.030
Cotton middling, 1", N.Y., lb.	.630	.620	.636
Printcloth, 48", 80x80, N.Y., spot, yd.	.65	.64	.65
Army duck, 37", 13 oz., yd.	1.48	1.48	1.70
Blended printcloth, 64", 78x54, yd.	.72	.73	.73
20s combed yarns	2.05	2.05	1.95
Wool tops, N.Y., lb.	1.80	1.80	2.10
CHEMICALS			
Acrylonitrile, tanks, lb.	.395	.395	.455
Ammonia, anhydrous, tanks, Gulf Coast, ton	165.00	N.A.	N.A.
Benzene, petroleum, tanks, Houston, gal.	.67	.93	1.45
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	.58	.58	.58
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	.106	.106	.106
Glycerine, synthetic, tanks, lb.	.91	.91	.86
Methanol, snv., tanks, 4,000 gals., f.o.b. Gulf Coast plants	.52	.52	.54
Naphthalene, crude, tanks, lb.	.22	.22	.22
Phthalic anhydride, tanks, lb.	.270	.270	.305
Polyethylene resin, low density liner film grade (market place), lb.	.345	.320	.280
Polypropylene, homopolymer grade (market price), lb.	.37	.36	.33
Polystyrene, general purpose grade (market price) lb.	.33	.35	.34
Polyvinyl chloride, pipe grade (market price) lb.	.305	.290	.330
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	.21	.26	.26
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	157.50	157.50	157.50
Sulphuric acid, 66%, commercial, tanks, ton	66.86	66.86	56.85
Titanium dioxide, anatase, reg., carlots lb.	.73	.73	.69
Xylene tanks, gal.	1.36	1.36	1.36
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	307.20	305.20	302.00
Lumber 2x2 pine, mbf, cl	305.35	296.65	300.35
Plywood, plyform, ¾", msf, cl	590.60	566.65	570.20
Plywood, ⅜", msf, cl	381.20	375.05	372.10
Cement, bulk, ton, tl	65.84	66.07	64.76
Sand, ton, cl	6.46	6.42	6.21
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	48.33	48.21	47.39
Crushed stone, 1½", ton, cl	7.92	7.84	7.57
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.83	0.82	0.79
Gypsum sheathing, ½"x1"x8", msf, tl	213.87	210.17	206.44
Brick, common, per thousand, tl	186.71	185.71	179.89
Asphalt paving, AC-20	167.53	172.31	175.08
Concrete sewer pipe, 12", prem. joint, per foot, cl	7.07	7.07	7.22
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	10.50	12.25	23.85
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	16.50	19.00	29.75
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	.585	.455	.855
Gasoline, 94 oct., reg., Chi., tank car, gal.	.435	.398	.810
Heating oil, No. 2, Chi., bulk, gal.	.590	.440	.765
Heating oil, No. 2, N.Y., bulk, gal.	.450	.605	.808
Heavy fuel, PS 400, Los Angeles, rack, bbl.	26.50	26.50	26.50
Jet kerosene, gal.	.400	.458	.743
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	.290	.330	.355
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	74.00	74.00	85.00
Steel, No. 1 hvy., dlvd., Chi., ton	73.00	73.00	79.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	.580	.605	.575
Copper, No. 2, East, wholesale, dlvd., lb.	.500	.525	.500
Brass, red, East, wholesale buy, dlvd., lb.	.540	.565	.535
Brass, yellow, East, wholesale buy, dlvd., lb.	.300	.300	.350
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	.390	.375	.325
Alum., mixed clip., E., wholesale buy, dlvd., lb.	.415	.400	.345
Zinc, old, East, wholesale buy, dlvd., lb.	.150	.150	.140
Lead, clean solids, East, wholesale buy, dlvd., lb.	.105	.100	.100
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	12.00	10.00	15.00
Paper, old corrug. box, dlr., N.Y., bon	12.00	10.00	10.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	.11	.11	.10
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	.125	.130	.280

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

Photo courtesy of Alcoa-Metal Box

High-clarity STEP plastic containers are heat retortable up to 250 F and compatible with existing filling and closing equipment.

Lid to stay on packaging prices

Robert S. Reichard, executive editor

Packaging buyers can continue to smile about the price picture through this year. Factors such as more-than-ample capacity, relatively low material input costs, and cut-throat competition—vying for the $70 billion-plus U.S. market—will hold the overall average increase to about the same level as the subdued general inflation rate.

But a repeat of 1985—when weaknesses in corrugated and other products kept price averages from rising—is unlikely. Expect only modest increases though.

This is what buyers told ***PurchasingWorld*** in a our latest nationwide packaging survey. One PM sums it up this way: "We don't anticipate any serious problems. As of now we're looking for only a few percentage points rise in overall packaging costs—and hopefully even that can be postponed until after mid-year."

Here are some of the more specific findings of the ***PW*** survey:

- **Prices:** The average increase for the entire year is projected at 2.7%—up from a nearly flat pattern in 1985. Keep in mind this is only an average. A solid 30% of the surveyed buyers feel that because of competitive pressures they may be able to hold their costs at or below last year's level.

Buyer comments point to a mixed price picture because of continued easiness and/or discounting in such key packaging sectors as corrugated cartons, folding boxes, plastic bags, resins, closures, and metal drums.

Even the advances that are anticipated in some lines are relatively small. For instance, the typical increase in corrugated boxes for 1986 is estimated at no more than 5%. For many buyers, that would still leave the price of this important product line under 1984 levels when linerboard and corrugated first began to weaken.

- **Demand:** The projected average gain of about 2-3% for this year is about in line with 1985 figures—at least as far as the overall packaging mix is concerned. If this happens and if prices rise a bit as expected, total packaging outlays this year could approach $75 billion.

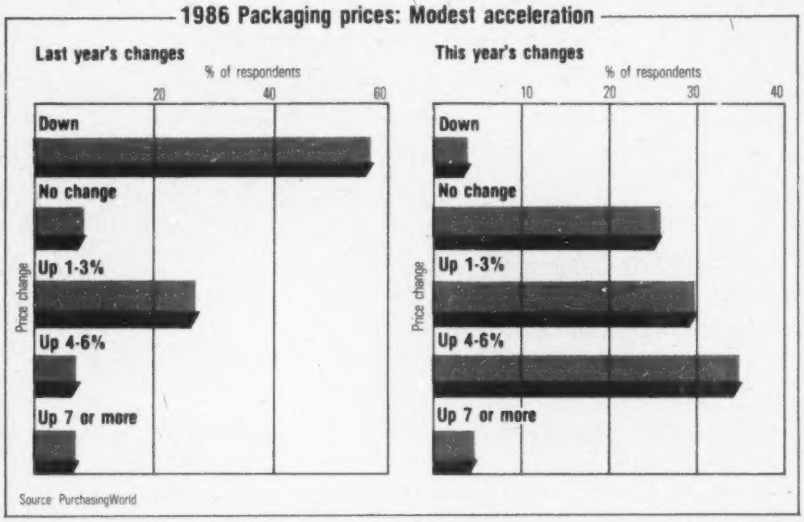
This, in turn, indicates that packaging will continue to maintain its importance in the overall purchasing mix. On this point, a Frost & Sullivan study puts packaging's share of GNP at nearly 1.8% of GNP—still in the narrow 1.8-2% range that has held since 1980.

- **Availability:** Not much worry here considering there are: (1) ample supplies of paper, metal, glass, and plastics; and (2) excess converting capacity. But some buyers expressed concern about possible strikes at suppliers' plants. And there were scattered mentions of tightness in a few areas—notably specialty beverage bottles, safety closures, and special shock mounts.

- **The changing mix:** Survey findings also reveal plenty of new developments and strategies aimed at keeping a lid on overall costs. Increased emphasis on plastic forms is high on the list and that is expected to erode some of the traditional markets for metal, glass, and paper packaging.

...continued

1986 Packaging prices: Modest acceleration



Source: PurchasingWorld

Aluminum, for one, faces new challenges from plastic food trays and plastic cans—both of which have been hitting supermarket shelves in recent months. And plastics' threat to glass bottles continues to grow. A new Chase Econometrics study indicates that versatile synthetics could capture as much as 35% of the soft drink market by the mid-1990s.

Paper is taking its licks, too. Replacement of paper bags is, of course, the key trend, but it is not the only one. Plastic corrugated, for example, would be used as a one-for-one substitute for paper using the same construction, but with improved qualities, and aimed at the same market.

New plastic-for-paper moves are also apparent in heavy industry. Detroit is ready to replace small corrugated cartons (used for nuts, bolts, and small parts) with new plastic returnable cartons—a move that could pay for itself after four or five uses.

The auto industry's commitment to using "returnable containers" will dramatically cut into corrugated use.

But substitution isn't the only strategy impacting this dynamic industry. Redesign and use of thinner gauge materials are significant factors in cost-conscious buyers' strategies. And every indication is that 1986 and 1987 will yield even more payoffs in these two areas.

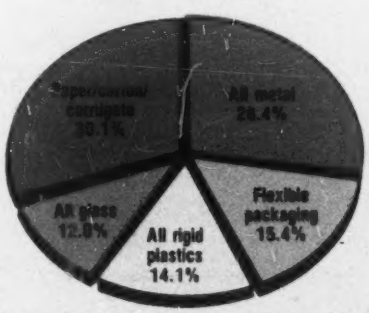
The increasing enlistment of vendor help to critique current packaging efforts and to come up with cost-cutting ideas is also having some significant long-range impact on the way the industry and buyers are doing business.

This doesn't exhaust the list of possibilities. Packaging buyers say they are stressing increased standardization of their packages, more use of long-term contracts, extended price guarantees, broader vendor bases, and the shifting of the inventory burden onto suppliers. One PM tells of hiring a consultant who developed a corrugated price formula which eventually resulted in a 40% reduction in his costs.

Key packaging modes

With all these forces buffeting the industry in mind, here's a detailed rundown of what's happening in each key mode—starting with paper, which accounts for more than 30% of total packaging outlays.

How the packaging market splits up
(% of overall packaging outlays)



Source: Frost & Sullivan

- **Corrugated cartons:** Shipment volume should advance about 2.5% this year—reaching a new record of 272 billion square feet—well above 1985's relatively flat pattern of 226 bsf. Prices could climb a bit. But because operating rates for linerboard (the key raw material) are expected to remain in the relatively low 91% range—well under the 97% reading of 1984, the hikes should be very modest. The long-term growth rate will also average out around 2.5% a year—with board capacity expected to keep pace.
- **Folding boxes:** Last year's 1% drop in shipments will give way to about a 2.5% increase in the current year, with totals advancing to 2.77 million tons. In the long run, only about a 1.2% annual rate of growth is forecasted—bringing the total usage to nearly 2.9 million tons by 1990.

This industry will also place more emphasis on quality and appearance improvements of its products through better design and graphics. There will be more emphasis on raising productivity by (1) improved equipment for cutting and creasing after printing, (2) infrared ink-curing systems to reduce the delay between carton printing and cutting/creasing, and 3) automation and computerization in manufacturing and distribution.

- **Set-up boxes:** Two years of declining demand will finally give way to a 1.5% increase in shipments for 1986. This reflects improved consumer disposable income which, in turn, should stimulate purchases of luxury non-durable goods that are generally packed in rigid boxes.

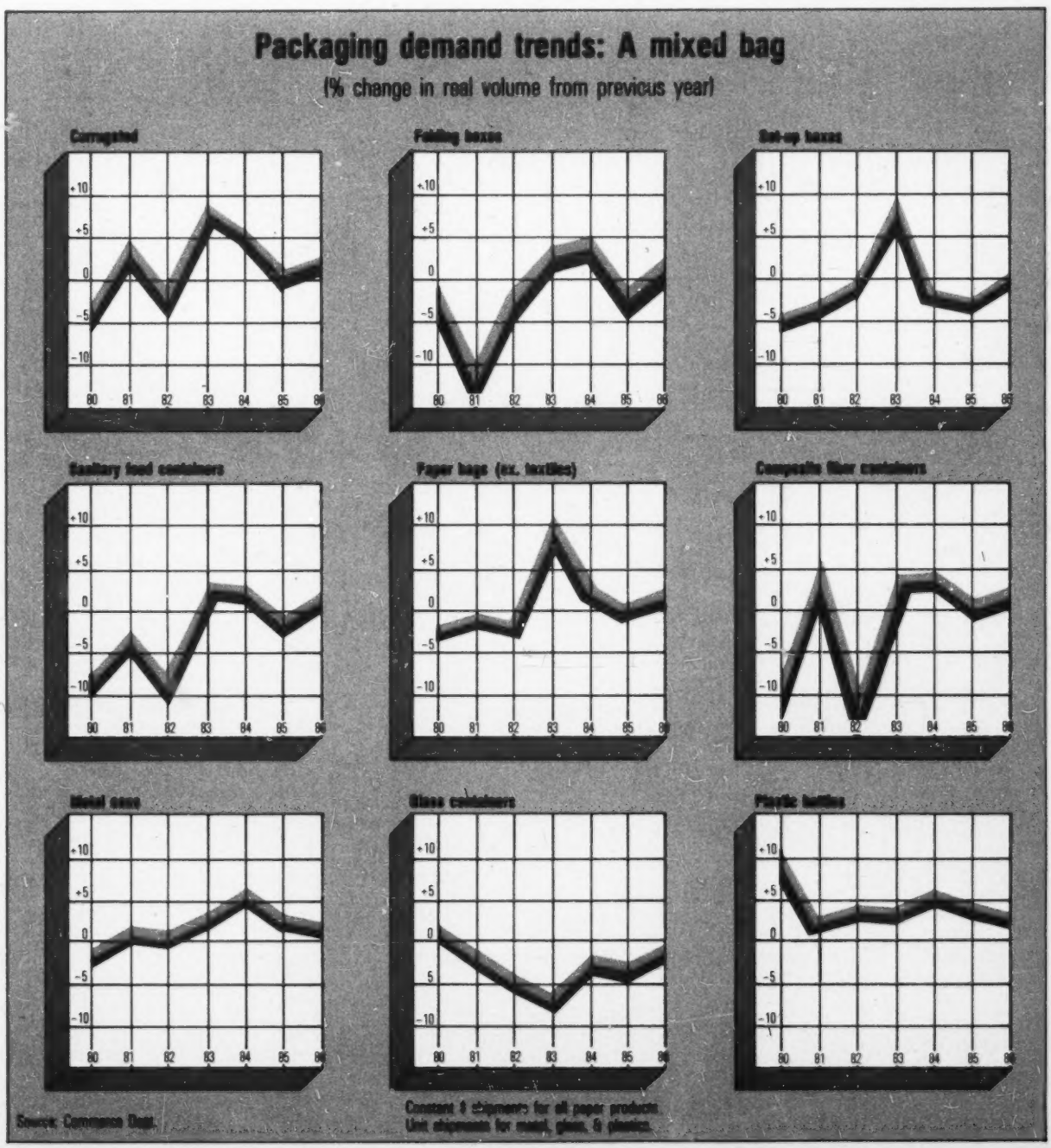
In the longer run, shipments are forecast to increase by about 1% annually through 1990. Growth markets include packaging for cosmetics, pharmaceuticals, confectionery, and electronics. Competition from other packaging forms will continue, but the industry is expected to retain most of its share of market for high-value specialty items.

...continued

■ **Sanitary food containers:** Real shipments are expected to climb about 2% this year—more than offsetting last year's decline. Sales of paperboard milk containers will increase at the expense of plastic. And aseptically packaged juices and drinks should continue to grow. But aseptically packaged, flavored milk shipments will lag, constrained by hard-to-change consumer buying habits and tastes.

A 2.2% annual growth rate is seen through 1990 for these packages. But this figure assumes a continued growth in fast food and convenience food services. Aseptics will continue as the industry's growth leader—with a greater diversity of foods and beverages contributing to the gain. Also, plastics will compete strongly with paperboard in most areas, including aseptics.

■ **Bags and sacks:** The real value (both paper and nonpaper constructions) should climb 2.5% this year. Plastics will continue to make inroads into the grocery bag and sack market—capturing as much as 30% of real value of shipments this year.



The longer-run outlook—1986-90—is for about 2% average annual gains—with much of that growth in heavy-duty bags and sacks, and in specialty liners. By 1990, plastics should have about half of the bag and sack market.

Other growth areas over this period include plastic shrink and films used to bundle heavy-palletized loads. Retort pouches will also begin to show some growth, but will still fall short of industry expectations.

■ **Fiber cans and drums:** Count on about a 2.2% increase this year. The most significant advance will be in composite cans and fiber drums, despite continuing competition from plastic alternatives.

A somewhat higher 2.5% annual rate of growth is seen for the 1986-90 period, with composite cans penetrating new markets, especially in the non-food areas. Also, fiber drums will make further headway against metal drums, but will lose some to plastic varieties.

■ **Metal cans:** A modest 1% increase in demand is forecast for the current year—most of which will be in the aluminum-dominated soft drink area. By contrast, food can usage could fall further as demand for convenience frozen foods reduces the market for steel cans. A total of 102.5 billion units should clear the market this year, with aluminum accounting for two-thirds of the total volume. Prices could inch ahead, too, with perhaps as much as a 3% advance possible.

It doesn't seem likely there will be any speedup in the long haul, as market saturation continues to hold gains down. Expect no more than about 1% annual gains. Some challenge in the food market is also ex-

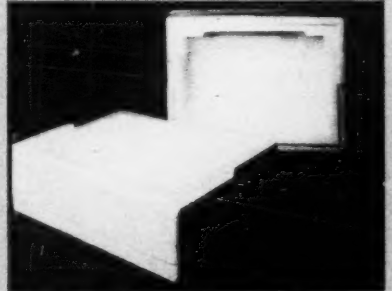
Check it out

■ **Packaging Services Industries,** a Bemis Company, offers case imprinters capable of printing logos, art work, product identification, lot numbers, private labels, and promotional data on up to four sides of corrugated cases at speeds up to 40 cases per minute. **Circle 9**

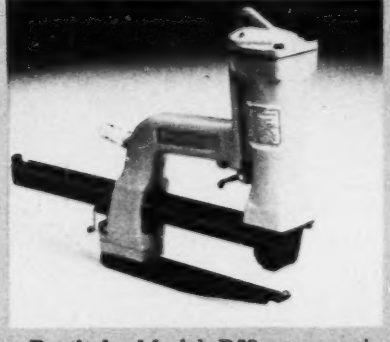
■ **Owens-Illinois Inc.** Brochure on "Corrugraphics—The Guide to Powerful Packaging" tells how to turn plain, brown corrugated shipping boxes into superior, full-color marketing tools. **Circle 5**

■ **Contex Graphics Systems Inc.** automates the creation of packaging graphics from concept all the way to color separations. Firm is joint venture of Continental Can and Scitex America. **Circle 4**

■ **Klearfold® Inc.** Three full-color sheets, printed on heavy coated stock for filing show 36 different styles of folding cartons that can benefit from firm's Duofold® packaging. Duofold combines transparent soft creased rigid vinyl with paperboard or other materials in one integral structure. **Circle 7**



■ **ARCO Chemical Co.'s** ARSAN™ moldable resilient resin has been selected by the Ames Div. of Miles Laboratories to protect an expensive glucose testing kit. **Circle 6**



■ **Bostitch.** Model P50 pneumatic stapling plier closes end inserts of corrugated containers firmly. Heavy-duty air tool drives staples in leg lengths of ¾ in. to ⅞ in. to penetrate and securely fasten up to two thicknesses of double-wall, AB flute, 500-lb test board or four thicknesses of single-wall, C flute, 275-lb test board. **Circle 8**

■ **Stone Container Corp.** lays claim to being "number one" producer of containerboard, corrugated containers, and kraft paper with $426 million purchase of three containerboard mills and 52 converting plants from Champion International Corp. Firm is already largest producer of paper bags and sacks. **Circle 3**

■ **U.S. Can Co.** is first to use laser welding of steel aerosol can bodies commercially. The side seaming process, never used before in the industry, is running at the rate of 215 units a minute in the popular 4¹¹⁄₁₆ in. high can size. The firm's goal is to reach the speed of 430 cans a minute within a year. **Circle 10**

pected from coextruded plastic bottles and multi-layer thermoformed plastic containers. But metal cans should continue to dominate this area of food packaging.

■ **Glass containers:** Unit shipments are forecast to decrease 2% this year. That will be the sixth straight year of declines. And competition from aluminum cans in the beer market and plastic bottles in the soft drink market will continue to hold back growth and limit price increases.

The demand downtrend is expected to continue in the long term—with about 0.5% a year shaved off shipments though 1990. But the decline won't be as steep as in the past because the industry is consolidating, reducing costs, and exploiting markets where it has a competitive edge.

■ **Plastic bottles**: Bigger-than-average gains are continuing into the current year when sales are expected to reach 18.7 billion units—up 3.3% from 1985 levels. The half-liter soft drink market represents the major growth potential, although advances here are still limited because current technology cannot ensure positive carbonation retention in small bottles.

The following years also promise good demand gains—probably 4% annually. The big potential is in the half-liter soft drink bottle, as mentioned, and in coextruded and multilayer plastic food containers.

PW

What to look for on boxes

Emphasis is on design and enhanced graphics in multi-ply boxes. Developments to watch include increased use of flexography in color printing, further improvements in graphic design, greater use of preprinted linerboard, further computerization of plant operations, better marketing and distribution methods, modifications of existing box specifications for strength, improved coatings and adhesives, and an increased number of corrugated/plastic combinations.

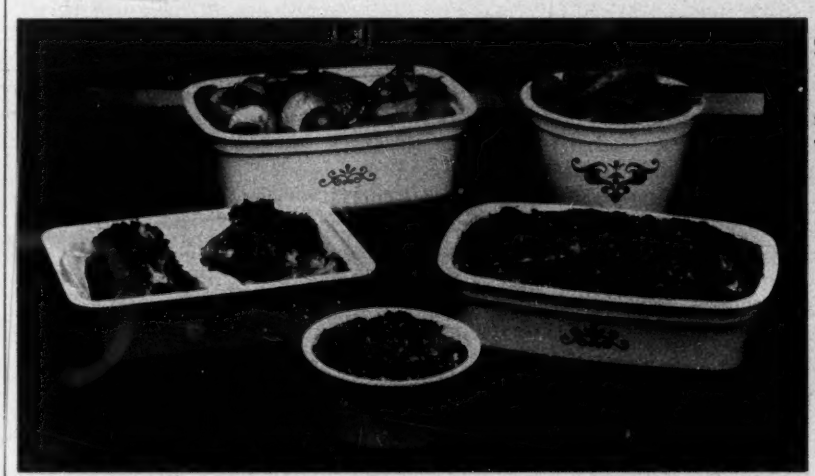


Photo courtesy of Alcoa-Metal Box

Lamipac containers are heat retortable and microwaveable and will provide shelf life up to two years, say joint venture partners Alcoa and Metal Box.

Alcoa in joint venture to make plastic cans

If the containers of fruits and premium vegetables found on page 56 of this packaging report look surprisingly like cans, maybe it's because they are just that—plastic cans. They're called STEP containers and they will be produced in this country through a joint venture between Alcoa and Metal Box America Inc., a Westport, CT-based subsidiary of the British firm Metal Box p.l.c. of Reading, England.

The British parent developed the plastic barrier package technologies used in the containers. The barriers help prevent migration of oxygen, moisture, and carbon dioxide through the container wall, thus preserving product freshness. The containers may be used for nuts, snacks, pastas, and other dry food products as well.

Initial focus of the joint venture will be to make four new food packages with the ability to withstand the high temperatures required for hot filling, retorting (in-plant cooking), and reheating. Several of the packages will be microwaveable (the wave of the future?) and one can also double as a serving dish.

The new packaging products fall into four categories:

■ Lamipac heat retortable and microwaveable plastic containers which provide shelf life of up to two years without refrigeration for entrees such as meat, fish, and pasta-based products, and side dishes such as premium vegetables, desserts, and other foods. The high-barrier thermoformed containers are made from coextruded multilayer plastic sheet.

■ High clarity or opaque plastic STEP containers, made of polyethylene terephthalate (PET), are heat retortable up to 250°F, and are compatible with existing filling and closing equipment.

■ Oriented polypropylene barrier bottles and jars which have high-contact clarity and hot fill capability for packaging ketchup, mustards, sauces, pickles, mayonnaise, jams and jellies. The oriented polypropylene containers also provide extended shelf life with good resistance to oxygen, moisture, and essential oils.

■ Aseptic packaging systems which use preformed microwaveable plastic containers for shelf-stable packages of dairy products, fruit juices and soups that require no refrigeration.

The Alcoa-Metal Box joint venture is a fifty-fifty proposition with about $100 million in capital investment planned for the first three years. Plants to produce the containers will be built in various parts of the country. For information **Circle 298**

Oil cuts to spur GNP, impact prices

While the current price is well below the $18/bbl assumption, the overall average price of crude could approach that figure—as prices slowly begin to recover in late 1986 and 1987, reflecting stronger demand and anticipated cutbacks in oil production.

How will sharply lower oil quotes affect the prices of chemicals, metals, and machinery? And what impact will they have on overall growth and on the demand for individual product lines?

Analysts at Wharton Econometrics—aided by their sophisticated computer models—have come up with answers to these and other questions of interest to PMs. In a report prepared especially for *PW* readers that assumes oil will settle at around $18/bbl, here is what they see ahead:

- **Overall growth:** Cheaper oil could add 0.9% onto real GNP this year and 0.6% in 1987. For industrial production, the increments are 1.6% and 1.4%.
- **Industry-by-industry growth:** The big gainers will be housing, autos, and machinery. Advances in these sectors will generate demand for steel, nonferrous metals, tires, plastics, lumber, structural metal, carpeting, and appliances. The few losers are petroleum, and interest-insensitive products: food and clothing and their basic raw materials.
- **Inflation:** The cost-of-living will probably drop about 1% in both 1986 and 1987. Industrial producer prices can be expected to dip 0.7% this year and 0.9% next year.
- **Interest rates:** Both long and short term rates should fall about 100 basis points (one basis point is 0.01%) because of both lower inflation premiums built into pricing and presumed easing of monetary policy by the Fed to keep the fragile banking system afloat.
- **Other probable pluses:** Faster economic growth will permit bigger tax collections. In addition, lower inflation suggests that Uncle Sam's procurement outlays can be cut without the government receiving fewer products. This could mean that the federal budget can be significantly smaller in 1987.
- **Long term impact:** If oil prices stabilize at $18/bbl, real GNP will average 1% higher for each of the next 10 years, with inflation running about 1% lower. Lower oil quotes also mean increased productivity—as investment is shifted away from energy-saving capital and toward labor saving investments.

Averages, of course, tell only part of the story. Of equal importance to purchasing execs is what happens to individual product lines. Under-a-dollar gasoline prices are already a reality and you can expect to see almost all other sectors follow the same degree of price deceleration.

This is clearly confirmed by Wharton computer runs which suggest a mixed price pattern. As analysts from the Philadelphia-based economic consulting firm explain it:

Two basic forces will be operating, but in opposite directions. Specifically, lower oil input prices will put downward pressure on quotes, while increased demand will work to push prices up.

In general, finished goods will experience the enhanced demand most quickly and, in some cases, will boost prices more than they would with higher oil tags. On the other hand, more basic goods will be dominated by reduced input costs which should put downward pressure on prices.

The biggest negative effect of lower oil prices will be in crude materials where processing costs will tend to dominate. Obviously, energy goods are included in this group. All oil-based fuels will show markedly lower prices and other fuel types will experience tough competition in markets where fuels can easily be substituted.

Other basic materials—such as metals, non-metallic minerals, and lumber—will have sharply lower energy costs. In addition, increased demand from consumers and business takes a while to feed through into better

The Oil Price Impact

On Prices
(% change in producer prices)

	1986		1987	
	Pre-oil Price Cut	Now	Pre-oil Price Cut	Now
All Indust. Commodities	1.6	0.9	2.8	1.9
Energy	1.4	−0.8	3.7	1.1
Chemicals	1.5	0.4	2.6	2.4
Rubber & Plastics	0.7	0.4	1.9	1.9
Lumber & Wood	−0.8	−1.2	1.9	1.7
Pulp & Paper	1.1	0.9	2.2	2.2
Metals & products	1.0	0.6	2.3	2.0
Machinery	1.0	1.1	2.3	2.5
Furn. & Household Dur.	1.3	0.9	1.9	1.7
Non-metallic Min.	3.1	2.3	3.7	3.3
Transp. Eqpt.	2.2	2.7	3.6	3.9
Textiles & Apparel	0.7	1.0	1.5	2.5

On Demand
(% change in industrial products)

	1986		1987	
	Pre-oil Price Cut	Now	Pre-oil Price Cut	Now
Overall Indust. Commodities	1.5	3.1	3.5	4.9
Transp. Eqpt.	1.6	6.2	4.5	4.1
Autos	5.3	3.1	6.2	2.6
Non-elec. Mchy.	3.7	5.9	7.2	8.8
Elec. Mchy.	0.4	2.2	5.6	6.8
Primary Metals	0.8	4.4	2.9	5.7
Textile	3.1	5.4	3.1	3.6
Apparel	−0.2	1.9	1.3	2.6
Paper	2.9	4.2	3.2	4.4
Chemicals	2.1	3.8	2.8	4.2
Lumber	3.0	5.5	2.4	3.1
Rubber & Plastics	3.5	6.0	4.9	5.7

Source: Wharton Econometrics

markets for these basic goods. So there will be little upward price pressure from the demand side.

Another type of commodity where lower oil prices should pass through directly to consumers is chemicals.

Historically, chemical price changes have been in the same direction, although not as large, as energy prices. Reason is that in the production of these products, feedstock outlays predominate over labor and other costs. And this relationship is likely to hold true over the next few years.

Offsetting lower prices for these commodities are others where demand increases overpower input costs as the key price determinant. Autos, some home goods, and machinery will probably have slightly higher prices than they would have if the sluggish demand expected before the stimulus of lower prices materialized.

Take a look at the "before and after" output estimates in the table if you have any doubt of the extent of the greater demand anticipated in these sectors. While overall production is expected to rise only 1.6% this year, the auto swing will be a lot bigger, with the pre-oil-price-cut projection for a 5.35% decline in 1986 giving way to a 3.1% increase.

That's a swing of 8.4%. Put another way, half million more cars will be sold in each of the next two years than would have been possible if oil had stayed at $26/bbl.

And in the nonelectrical machinery sector, earlier projections for 3.7% and 7.2% production gains in 1986 and 1987 have now given way to revised estimates of 5.9% and 8.8% advances. As Priscilla Luce, director of Wharton's Industrial Analysis Group puts it: "Because of initially lower interest rates and early expansion in the consumer-based sector, demand for machinery will build to a level substantially higher than otherwise would be expected by the middle of next year."

To sum up: The oil price decline looks good from almost every vantage point, though, admittedly, care will have to be taken to see that some hard-hit banks (those with portfolios dominated by oil and energy-related loans) can ride out what for them may be a relatively rough period. **PW**

This ad can be worth as much as $250. Tear it out, and cut your wiper costs by up to 50%.

We guarantee it.
Regardless of the number of cloth wipers your company uses per week, Scott can save you money — this year and every year — *and* improve overall efficiency at the same time.

And we'll back that promise up with a money back guarantee*. For details, call toll-free: **1-800-4-SCOTT-1.**

Can you afford to invest a few moments in that call?

Can you afford *not* to?

Here are more good reasons for investigating Scott wipers.

Scott technology makes cloth wipers impractical.
All over America, companies are taking part in a wiper revolution.

They're throwing away yesterday's cloth shop towels and rags, and switching to Scott cloth replacement wipers.

Why?

Because Scott has produced an advanced generation of wipers that outperform any cloth wiping products on the market at a price that will save you money.

Now it's your turn.
Find out why everyone's switching to the better value of Scott.

We'll prove to you, beyond the shadow of a doubt that this is why:
1. Scott WypAll® wipers give you the *performance* of rental *shop towels*, at a substantial savings.
2. Scott WypAll wipers give you better *absorbency* and consistency than *rags* — saving you money.
3. Scott WypAll wipers can save you hundreds of man-hours per year by eliminating the sorting and counting of cloth wipers.

Satisfaction guaranteed.
Sure, it's hard to change old habits. But in today's competitive environment, change is the key to survival.

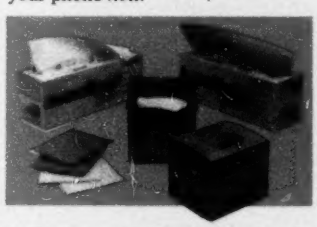
So to make it easier for you to try a money-saving change in your wipers, we offer this guarantee: you and your workers will be 100% satisfied with Scott wipers (and the costs savings you can realize by using Scott wipers), or we'll refund your initial purchase price up to $250.00.

You have absolutely nothing to lose — unless you let this offer pass you by.

Make this ad pay off.
Just tear it out, fill in the coupon, and mail it *today*. Or, for faster attention, call toll-free: **1-800-4-SCOTT-1.**

Either way, you'll be on the road to huge savings and better wiper performance.

But don't wait. You won't find another ad in this magazine that's worth $250. So before you read any further, tear out this ad or pick up your phone *now*.



Scott has more than 23 wiper brands to choose from, including WypAll®, America's #1 all-purpose wiper.

*Up to $250 for first order.

Yes! I want to save money on wipers this year.
☐ Have a Scott wiper specialist contact me to arrange a no-obligation wiper cost analysis.
☐ Send me more information on Scott wipers.
PWD-0586

Name_____ Title_____

Company_____

Address_____

City_____ State_____ Zip_____

Phone_____

Mail this page to: Scott Wiper Guarantee Offer
P.O. Box 830
Devon, PA 19333

SCOTT
THE HOUSEHOLD NAME, AT WORK.

Circle 397 on card